

Appendix J: Potential Wetland Restoration Site Methodology

POTENTIALLY RESTORABLE WETLAND SITE IDENTIFICATION METHODOLOGY

Geographic data from the Lake County Wetland Restoration and Preservation Plan (WRAPP) and the USEPA/Tetra Tech pilot study “Region 5 Wetland Management Opportunities and Marketing Plan: *Select Watersheds in the Lower Fox and Des Plaines River Watersheds*” (Tetra Tech, 2015) were used as the baseline for potential wetland restoration site selection and prioritization. The Lake County WRAPP data cover the planning area within Lake County, Illinois. The USEPA/Tetra Tech pilot study produced similar data for the North Mill, Mill, and Buffalo Creek subwatersheds, and were added to the WRAPP data for the areas of the Buffalo Creek subwatershed in Cook County, Illinois and the North Mill Creek subwatershed in Kenosha County, Wisconsin. This combined dataset was augmented with polygons from the National Wetlands Inventory for the portion of the Lower Des Plaines River in Cook County.

The data include qualitative predictions of significance level (High, moderate, low) for various beneficial wetland functions, including **flood water storage, nutrient transformation, sediment and particulate retention, streambank stabilization, baseflow maintenance, and stream shading**. Due to the sheer number ($n > 5,000$) of potentially restorable wetland polygons (PRWs), additional filtering and prioritization criteria were applied to obtain a reasonable number of potential restoration sites for cost and pollutant load reduction and inclusion in the action plan. In addition, “high priority” wetland restoration sites from the five previously-completed watershed-based plans (North Mill Creek, Mill Creek, Bull Creek-Bull’s Brook, Indian Creek, and Buffalo Creek) were considered in the process. The method for prioritization is outlined below.

- 1) “High Priority” sites identified in previously-completed watershed-based plans were manually spot-checked against the potentially restorable wetland polygons for the planning area. Those that were coincident with PRWs or in close enough proximity to be considered the same site were retained for further analysis.
- 2) Additional PRWs from all subwatersheds that met ALL of the following criteria were retained for further analysis:
 - a. Centroid located on publicly protected open space, as identified in the watershed planning area green infrastructure network
 - b. PRW polygon > 1 acre in size
 - c. Wetland functional significance rated “High” for at least 2 of the functions identified in the narrative above
- 3) PRWs selected through steps 1 & 2 were compared to the top 20% of the highest nutrient and sediment loading catchments from the pollutant load model. Those within the top 20% catchments were retained for further analysis.
- 4) Additionally, PRWs not within those catchments, but estimated as having “high” functional significance for at least 4 of the functions identified above, were retained for further analysis.
- 5) PRWs > 10 acres, regardless of ownership or functional significance, were retained for further analysis.
- 6) The remaining PRWs were reviewed within the geographic information system to ensure that they are reasonable site locations.